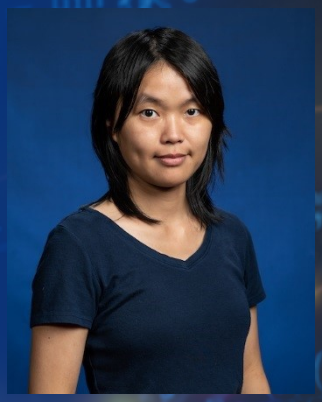

Dr. Tingting Hu

MATHEMATICS SEMINAR SERIES

# The Mathematics Seminar Series

## Presented by The Department of Mathematics

# STRUCTURAL CLUSTERING IN UNCERTAIN GRAPHS

**Guest lecturer: Dr. Tingting Hu**
Embry-Riddle Aeronautical University

**Date: 4/1/21**
**Time: 12:30-1:30 PM**

zoom https://erau.zoom.us/j/96824101015

**ABSTRACT:**
Clustering uncertain graphs based on probabilistic graph structures has sparked extensive research interest and widely varying applications. The existing structural clustering solution, however, relies heavily on the computation of reliable structural similarity for node pairs, which is costly in large uncertain graphs. In this talk, we present a new, decomposition-based method, DUSCAN, for efficient reliable structural similarity computation with theoretically improved complexity. We further design a cost-effective index structure UCNO-Index, and a series of powerful pruning strategies to expedite structural clustering in uncertain graphs. The effectiveness of our proposed solutions is discussed via experimental studies on real-world uncertain graphs.

**SEMINAR SERIES ORGANIZERS:**

Dr. Stefan C. Mancas
Embry-Riddle Aeronautical University
Department of Mathematics
1 Aerospace Blvd.
Daytona Beach, FL 32114
Email: mancass@erau.edu
Phone: 386-226-7749

Dr. Mozhgan "Nora" Entekhabi
Florida A&M University
Department of Mathematics
1601 S. Martin Luther King Jr., Blvd.
Tallahassee, FL 32307
E-mail: mozhgan.entekhabi@famu.edu
Phone: 850-412-5230

MATH
EMBRY-RIDDLE
Aeronautical University
DAYTONA BEACH, FLORIDA
COLLEGE OF ARTS & SCIENCES
Department of Mathematics